

CLAIMS

1. A method of treating nerve damage comprising administering to a subject in need thereof an effective non-toxic amount of an MGF (mechano-growth factor) Insulin-like Growth Factor I (IGF-I) isoform comprising amino acid sequences encoded by nucleic acid sequences of IGF-I exons 4, 5 and 6 in the reading frame of MGF and having the ability to reduce motoneurone loss by 20% or greater in response to nerve avulsion, by localisation of said MGF at the site of said damage.
2. A method of claim 1 wherein said nerve damage is to a nerve of the peripheral nervous system (PNS).
3. A method of claim 1 wherein said MGF is localised at said site of the damage by means of a conduit placed around the nerve at said site of said damage.
4. A method of claim 3 wherein said conduit comprises Poly-3-hydroxy-butyrate (PHB).
5. A method of claim 1 wherein said damage comprises the severing of the nerve
6. A method of claim 2 wherein said treatment of said nerve damage is combined with a treatment that prevents or diminishes degeneration of the target organ which the damaged nerve innervates.
7. A method of claim 6 wherein said target organ is a muscle and treatment of the muscle with MGF or a polynucleotide encoding MGF prevents or diminishes degeneration.

8. A method of claim 6 wherein treatment of the target organ with a polypeptide growth factor than than MGF prevents or diminishes degeneration.
- 9 A method of claim 1 wherein said MGF has the ability to reduce motoneurone loss by 50% or greater or 80% or greater in response to nerve avulsion
10. A method of claim 1 wherein said MGF is unglycosylated
11. A method of claim 1 wherein said MGF has:
  - (a) the sequence of Human MGF (SEQ ID NO. 2, Rat MGF (SEQ ID NO. 4) or Rabbit MGF (SEQ ID NO. 6),
  - (b) a sequence having 70% or greater homology to a sequence of (a);
  - (c) a sequence comprising the amino acids encoded wholly or partly by exons 4, 5 and 6 of human, rat or rabbit MGF DNA of SEQ ID NO. 1, 3 or 5, or a sequence having 70% or greater homology thereto; or
  - (d) a sequence encoded by a nucleic acid sequence capable of selectively hybridising to a sequence of (a), (b) or (c).
- 12 A method of claim 1, further comprising treatment with another neurologically active agent MGF is carried out in combination with said MGF.
13. A kit for the treatment of nerve damage comprising:
  - (a) an MGF IGF-I isoform;
  - (b) a conduit adapted to be placed around a damaged nerve of the site of said damage;
  - (c) a further polypeptide growth factor which prevents or diminishes degeneration; and optionally
  - (d) another neurologically active agent.

SEQUENCE LISTING

<110> GOLDSPINK, GEOFFREY

<110> TERENGHI, GIORGIO

<120> TREATMENT OF NEUROLOGICAL DISORDERS

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<170> PatentIn Ver. 2.1

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Phe Arg Ser Cys Asp Leu Arg Arg Leu Glu Met Tyr Cys Ala Pro Leu  
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Lys Pro Ala Lys Ala Ala Arg Ser Val Arg Ala Gln Arg His Thr Asp  
65 70 75 80

Met Pro Lys Thr Gln Lys Glu Val His Leu Lys Asn Thr Ser Arg Gly  
85 90 95

Ser Ala Gly Asn Lys Asn Tyr Arg Met  
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